

What is claimed is:

1. A display device, comprising:

a light-emitting layer between a first electrode and a second electrode; and

a resonator structure resonating light generated in the light-emitting layer between a first end portion and a second end portion,

wherein an optical distance L_1 between the first end portion and a maximum light-emitting position of the light-emitting layer satisfies Mathematical Formula 1, and

an optical distance L_2 between the second end portion and the maximum light-emitting position of the light-emitting layer satisfies Mathematical Formula 2.

[Mathematical Formula 1]

$$L_1 = tL_1 + a_1$$

$$(2tL_1)/\lambda = -\Phi_1/(2\pi) + m_1$$

(where tL_1 represents a theoretical optical distance between the first end portion and the maximum light-emitting position, a_1 represents a correction amount based upon a light-emitting distribution in the light-emitting layer, λ represents a peak wavelength of the spectrum of light desired to be extracted, Φ_1 represents a phase shift of reflected light generated in the first end portion, and m_1 is 0 or an integer.)

[Mathematical Formula 2]

$$L_2 = tL_2 + a_2$$

$$(2tL_2)/\lambda = -\Phi_2/(2\pi) + m_2$$

(where tL_2 represents a theoretical optical distance between the second end portion and the maximum light-emitting position, a_2 represents a correction amount based upon a light-emitting distribution in the light-emitting layer, λ represents a peak wavelength of the spectrum of light desired to be extracted, Φ_2 represents a phase shift of reflected light generated in the second end portion, and m_2 is 0 or an integer.)

2. A display device according to claim 1, wherein

the correction amount a_1 satisfies Mathematical Formula 3, and the correction amount a_2 satisfies Mathematical Formula 4.

[Mathematical Formula 3]

$$a_1 = b(\log_e(s))$$

(where b is a value within a range of $2n \leq b \leq 6n$ in the case where the light-emitting distribution in the light-emitting layer extends from the maximum light-emitting position to the first electrode, or a value within a range of $-6n \leq b \leq -2n$ in the case where the light emitting distribution extends from the maximum light-emitting position to the second electrode, s represents a physical value ($1/e$ decay distance) relating to the light-emitting distribution in the light-emitting layer, n is an average refractive index between the first end portion and the second end portion in the peak wavelength λ of the spectrum of light desired to be extracted.)

[Mathematical Formula 4]

$$a_2 = -a_1$$

3. A display device according to claim 1, further comprising:

an organic layer including the light emitting layer between the first electrode and the second electrode.

4. A display unit, comprising:

a display device comprising a light-emitting layer between a first electrode and a second electrode, and a resonator structure resonating light generated in the light-emitting layer between a first end portion and a second end portion,

wherein an optical distance L_1 between the first end portion and a maximum light-emitting position of the light-emitting layer satisfies Mathematical Formula 5, and

an optical distance L_2 between the second end portion and the maximum light-emitting position of the light-emitting layer satisfies Mathematical Formula 6.

[Mathematical Formula 5]

$$L_1 = tL_1 + a_1$$

$$(2tL_1)/\lambda = -\Phi_1/(2\pi) + m_1$$

(where tL_1 represents a theoretical optical distance between the first end portion and the maximum light-emitting position, a_1 represents a correction amount based upon a light-emitting distribution in the light-emitting layer, λ represents a peak wavelength of the spectrum of light

desired to be extracted, Φ_1 represents a phase shift of reflected light generated in the first end portion, and m_1 is 0 or an integer.)

[Mathematical Formula 6]

$$L_2 = tL_2 + a_2$$

$$(2tL_2)/\lambda = -\Phi_2/(2\pi) + m_2$$

(where tL_2 represents a theoretical optical distance between the second end portion and the maximum light-emitting position, a_2 represents a correction amount based upon a light-emitting distribution in the light-emitting layer, λ represents a peak wavelength of the spectrum of light desired to be extracted, Φ_2 represents a phase shift of reflected light generated in the second end portion, and m_2 is 0 or an integer.)

5. A display unit according to claim 4, wherein

the correction amount a_1 satisfies Mathematical Formula 7, and the correction amount a_2 satisfies Mathematical Formula 8.

[Mathematical Formula 7]

$$a_1 = b(\log_e(s))$$

(where b is a value within a range of $2n \leq b \leq 6n$ in the case where the light-emitting distribution in the light-emitting layer extends from the maximum light-emitting position to the first electrode, or a value within a range of $-6n \leq b \leq -2n$ in the case where the light emitting distribution extends from the maximum light-emitting position to the second electrode, s represents a physical value (1/e decay distance) relating to the light-emitting distribution in the light-emitting layer, n is an average refractive

index between the first end portion and the second end portion in the peak wavelength λ of the spectrum of light desired to be extracted.)

[Mathematical Formula 8]

$$a_2 = -a_1$$

6. A display unit according to claim 4, further comprising:

an organic layer including the light emitting layer between the first electrode and the second electrode.